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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,224	02/07/2002	Klaus Arlt	IN-5546	9302

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EXAMINER
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BISSETT, MELANIE D

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/049,224	ARLT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Melanie D. Bissett	1711	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 June 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35 and 36 is/are allowed.
- 6) ☒ Claim(s) 19-34 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

1. The claim objections and rejections based on 35 USC 112 have been withdrawn based on the applicant's amendment. However, new rejections based on 35 USC 112 have been added as necessitated by amendment. Also, the prior art rejections have been withdrawn or altered to reflect the applicant's amendments.

***Information Disclosure Statement***

2. The reference in question, US 4,444,954, has been considered by the examiner and has thus been included in the present Form PTO-892.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 19-34 and 37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims now recite temperature ranges for the thermal curing of the electrocoat film. However, the parts of the specification relied on by the applicant for support of the newly added subject matter are drawn to the upper primer layers of the coatings and not to the electrocoat layers. On p. 59, the specification teaches that "except for the electrocoat material", the coatings may be

applied by a number of methods. The specification goes on to describe a spraying method, including preferred curing temperatures, for the primer layers. On pp. 61-62, the specification describes thicknesses and cure temperatures for the primer layers but does not mention the electrocoat layer. Thus, it is the examiner's position that the specification does not provide support for specific temperatures used in the thermal curing of the electrocoat layer.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 19-34 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 19 recites the limitation "2) applying the aqueous basecoat material". When a) is chosen, there is insufficient antecedent basis for this limitation in the claim.

8. Claim 37 recites the limitation "electrocoat of d) 1)" in line 1. There is insufficient antecedent basis for this limitation in the claim. Does the applicant intend to claim "electrocoat of d) i)"?

### ***Claim Objections***

9. Claim 21 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper

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dependent form, or rewrite the claim(s) in independent form. The claim recites an option of not curing the primer which has been added to the plastic part formerly having no primer. However, step 1) a) in claim 19 recites that the added primer is cured. Thus, the additional step of not curing the primer does not further limit the step of curing the primer.

***Claim Rejections - 35 USC § 103***

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
11. Claims 19-20, 22, 25-27, 30, and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al.
12. From a prior Office action:

Fujii discloses a process for coating automotive bodies comprising both metal and plastic members, the process comprising applying a cationic electrocoating to the metal component of the substrate, applying a barrier coat to the entire substrate, applying an intermediate coating, and applying a top coating (abstract). Note that the metal and plastic parts of the substrate are integrated assembled, preferably after electrocoating the metal components (col. 3 lines 22-38; col. 6 lines 47-63). The electrocoat material is thermally cured (col. 4 lines 57-68). The barrier coat may be organic or aqueous (col. 9 lines 3-5) and serves as a primer coat, where the barrier coat contains electroconductive substances (col. 10 lines 4-19; col. 11 line 55-col. 12 line 11). The barrier coat may be cured at temperatures under 100 °C (col. 12 lines 56-60). An aqueous intermediate coating may be applied (col. 13 lines 57-59), where color pigments may be added to form a color coat material (col. 13 lines 65-68). Top coatings include at least two components, may be aqueous, and may include both color and clear coatings (col. 14 lines 37-39; col. 16 lines 3-15). A wet-on-wet method may be used to apply a clear coat to a colored coat (col. 16 lines 25-28), where the coatings may be cured under 100 °C (col. 16 lines 40-43). The clear coat is scratch-resistant (col. 15 lines 27-40).

Fujii applies as above, where the reference teaches that the top coating films may be dried by heat or by air but does not specifically teach the step of partially drying a color coat before applying a clear coat composition (col. 16 lines 29-35). Note that any time elapsed would cause

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the first color coating to dry, since the reference teaches room temperature drying of the components. It is the examiner's position that it would have been prima facie obvious to allow the color coating to partially dry before applying a top coating to prevent mixing of the two liquid coatings at the interface. This could have been accomplished by altering the amount of time between coatings.

Regarding the epoxy-amine adduct of the electrocoat material, Fujii teaches such adducts (col. 4 lines 1-18).

Regarding claim 25, note that Fujii teaches options d) i) and 1) a) of claim 19. When the limitation of claim 25 is read into claim 19, the process is not limited to those options d) ii-iii) or 1) b-c). Thus, because Fujii teaches options d) i) and 1) a), claims 25-26 are also encompassed. Regardless, the intermediate coating comprises hydroxyl-containing polyester binders, where polyisocyanates and amino compounds may be used as crosslinking agents (col. 13 lines 18-20, 38-56).

Regarding claim 27, Fujii teaches a top coating paint comprising hydroxyl-containing binders and crosslinking agents (col. 14 lines 37-61). Metallic or color pigments are added to the color layer (col. 16 lines 8-28).

Regarding claim 33, Fujii teaches a color coat and clear coat composition, where the clear coats have improved scratch resistance (col. 15 lines 24-52). However, the reference does not teach the use of two clear coat compositions. It is the examiner's position that it would have been prima facie obvious to use more than one clear coat composition to amplify the benefits of the single layer. In this case, it would have been obvious to add an extra clear coat to further improve scratch resistance of the coating.

13. Additionally, note that the electrocoat compositions of the invention are cured at temperatures as low as 100 °C. This temperature falls within the experimental error range of "less than 100 °C"; thus, a process employing a temperature of 100 °C and a process employing a temperature of just under 100 °C would be indistinguishable. Within the ranges of experimental error, it is the examiner's position that the teachings of Fujii encompass temperatures in the range "less than 100 °C."

14. Regarding the limitation that the topcoat is both thermally and radiation curable, note that Fujii teaches thermally curable topcoat compositions of acrylic structure (col. 14 lines 17-61). Residual double bonds in the system would inherently be radiation

curable. Furthermore, the reference teaches irradiation as a method of curing the topcoat compositions (col. 16 lines 29-35).

15. Claims 28-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al. in view of Faler et al.

16. From a prior Office action:

Fujii applies as above, teaching that any coating suitable for primers, intermediate, or top coatings may be used as long as surface appearance, weather resistance, and other properties are met (col. 14 lines 17-36). Faler teaches aqueous coating compositions suitable for color basecoats and clear coats comprising a crosslinkable film-forming resin and an amphiphilic adjuvant (abstract). Hydroxyl-functional acrylic polymers, hydroxyl-functional polyurethanes, and hydroxyl-functional polyesters are all suitable for use as crosslinkable resins (col. 2 lines 59-62; col. 3 lines 28-39). Colored basecoats preferably comprise a blend of acrylic and polyester or polyurethane resins (col. 4 lines 29-34), while clearcoats preferably comprise acrylic polyols (col. 4 lines 52-56). Crosslinking agents to be added to the coating compositions include aminoplasts and polyisocyanates (col. 6 lines 1-12). Note these compositions are similar to those noted in the primary reference. Faler also teaches a method of applying the colored basecoat, drying the coating, applying a clearcoat, and curing the coatings (col. 10 line 42-col. 11 line 23). Colored coatings of the invention have improved wetting, pinhole resistance, smoothness, humidity resistance, and surface tension, while clearcoats have improved crater resistance, workability, water resistance, and weathering properties (col. 23 lines 54-67). Thus, it is the examiner's position that it would have been prima facie obvious to use the coatings of Faler's invention as colored and clear topcoats in Fujii's methods to improve the noted properties.

#### ***Allowable Subject Matter***

17. Claims 35-36 are allowed.

18. The following is a statement of reasons for the indication of allowable subject matter:

19. The closest prior art, Fujii et al., teaches a method of coating substrates having both metallic and plastic parts. However, the reference does not teach the use of two

primer coats on the plastic layer, one of which has a color matching that of the basecoat layer. It is the examiner's position that such a layer structure within the claimed integrated paint system provides a novel and unobvious step over the prior art. Note that claim 35 has also been amended to clarify that the substrates and the relationship between the coatings and substrates are included in the claimed paint system.

### ***Response to Arguments***

20. In response to the applicant's argument that the reference does not teach electrocoat films thermally cured at a temperature of less than 100 °C, it is the examiner's position that the endpoint taught by Fujii, 100 °C, encompasses those points just below 100 °C when experimental error is taken into account. The ranges are so close that a method employing 100 °C and one employing a temperature just below 100 °C would be indistinguishable. The claim reciting the range of 50-90 °C has not been included in the above rejection.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdb



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